



SEEDS Third Public Workshop Proposed SEEDS Standards Process (presentation to breakout)

SEEDS Standards Process Study Team
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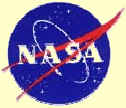
Standards and Interfaces Breakout

- Move beyond findings and recommendations in Chapter 2
 - Toward “execution” of proposed process.
 - Two breakouts
 - Accommodate as many views as possible.
 - Expect to run same show both times:
 - Part 1: Explain proposed process and roles.
 - Part 2: Charter discussion
 - We have a proposed draft
 - Need to particularly focus on objectives:
 - How focused or broad
 - Part 3: A scenario for how a need becomes a standard
 - Run through proposed process and examine what kinds of decisions might be made.
 - See where process might be broken could be better.

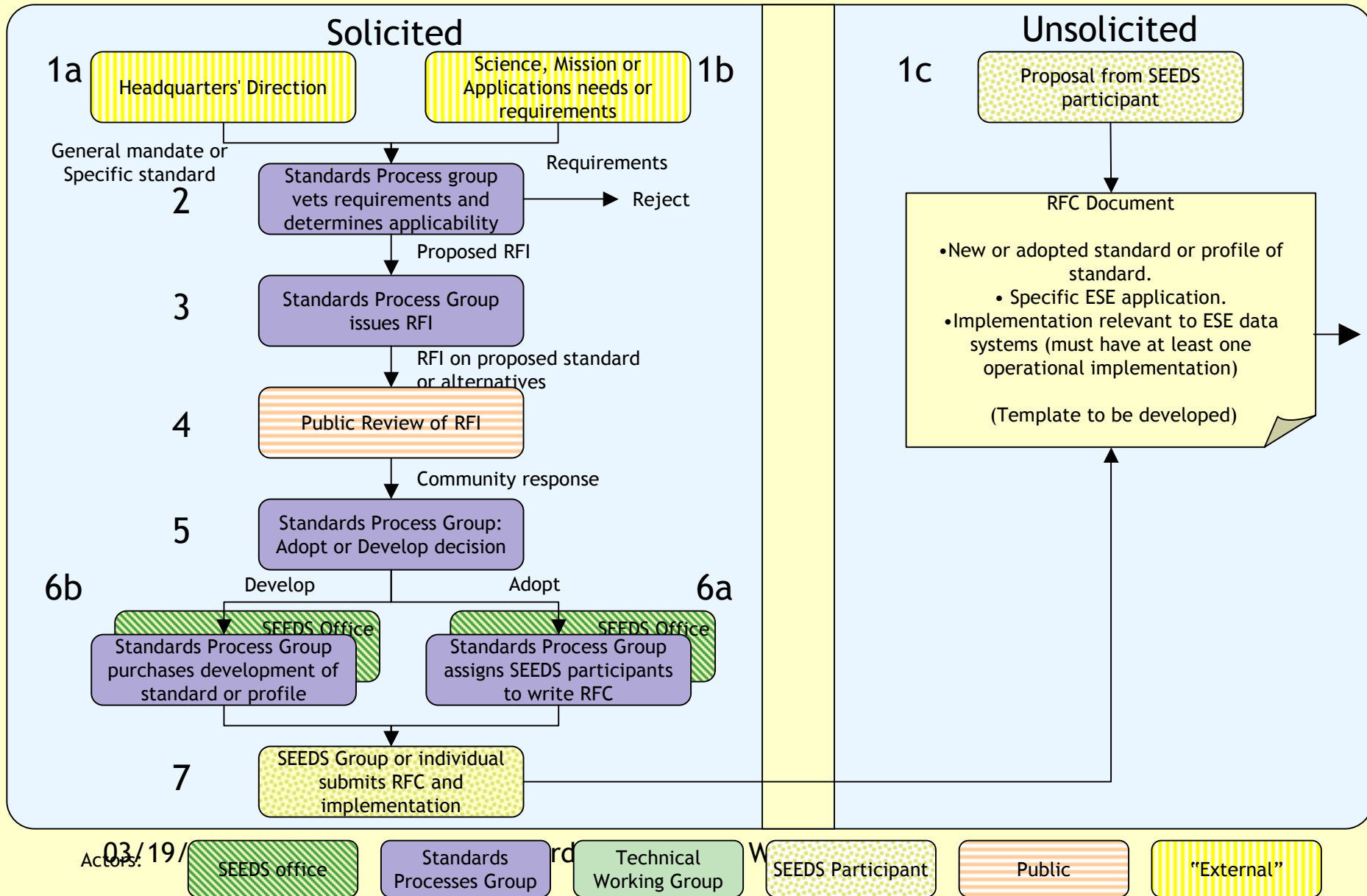


NTMS Standards Recommendations

- Named standards are near-term recommendations
 - Evolving from where we are today
 - Process for making these recommendations does not reflect the standards process we envision for SEEDS.
 - May be over-conservative because of near term and mission focus.

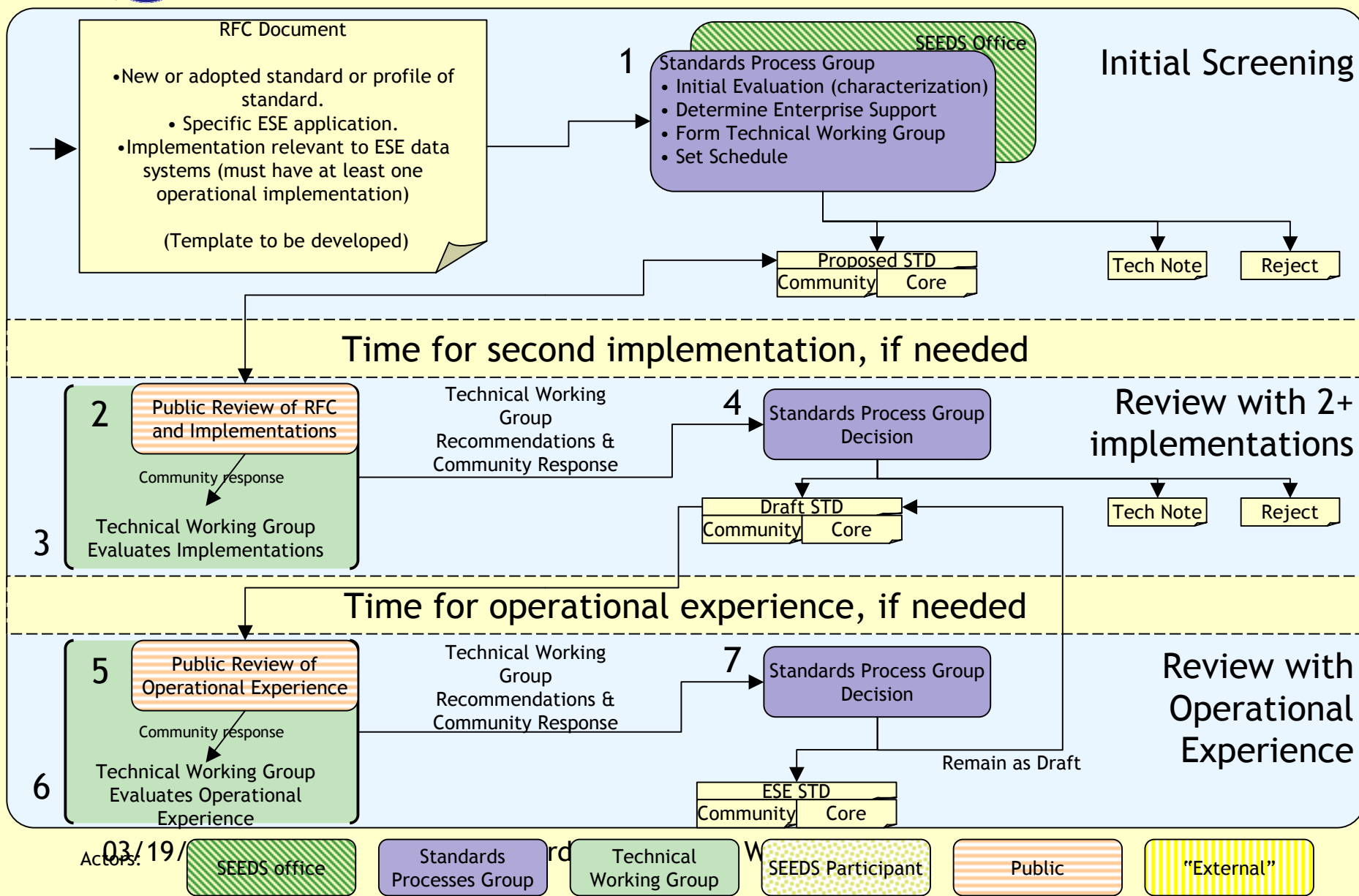


Standards Process: Path to RFC





Standards Process: Path to Approval





Standards Process Group

- Group composed of full time staff and part time permanent members funded to participate from SEEDS Office, ESE data systems awardees (e.g. REASON CAN), mission systems, science data providers, etc.
- Standards Process Group manages/coordinates activities needed to support the adoption, development, and approval of ESE Standards
- Identifies where core ESE standards are needed
- Forms and tasks Technical Working Groups for the evaluation of candidate standards
- Performs public reviews and evaluations of various candidate standards, including implementations and operational experience



Standards Process Group (cont)

- Publicizes the interfaces where core ESE standards are needed to the SEEDS communities, industry, and external organizations
- Advises the SEEDS Office of resources needed to develop or adopt standards, and provide technical support for existing ESE standards
- Coordinates document management for all candidate standards, approved ESE standards, and technical notes that come before the Standards Process Group
- Facilitates information flow among community standards processes
- Participates in national and international data systems standards organizations



Technical Working Groups

- Panel of technical experts selected and commissioned by the Standards Process Group to perform a specific review and evaluation of a specific candidate standard (proposed and draft versions), including implementation(s), and operational experience.
- The duration of the Technical Working Group corresponds to the review schedule set by the Standards Process Group for a particular candidate standard.



SEEDS Third Public Workshop Standards Process Breakout (feedback received at breakout)

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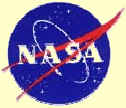
Highlights of comments:

- Positive and constructive feedback
- Focus of most comments were suggestions on how to improve the proposed process rather than wholesale changes.

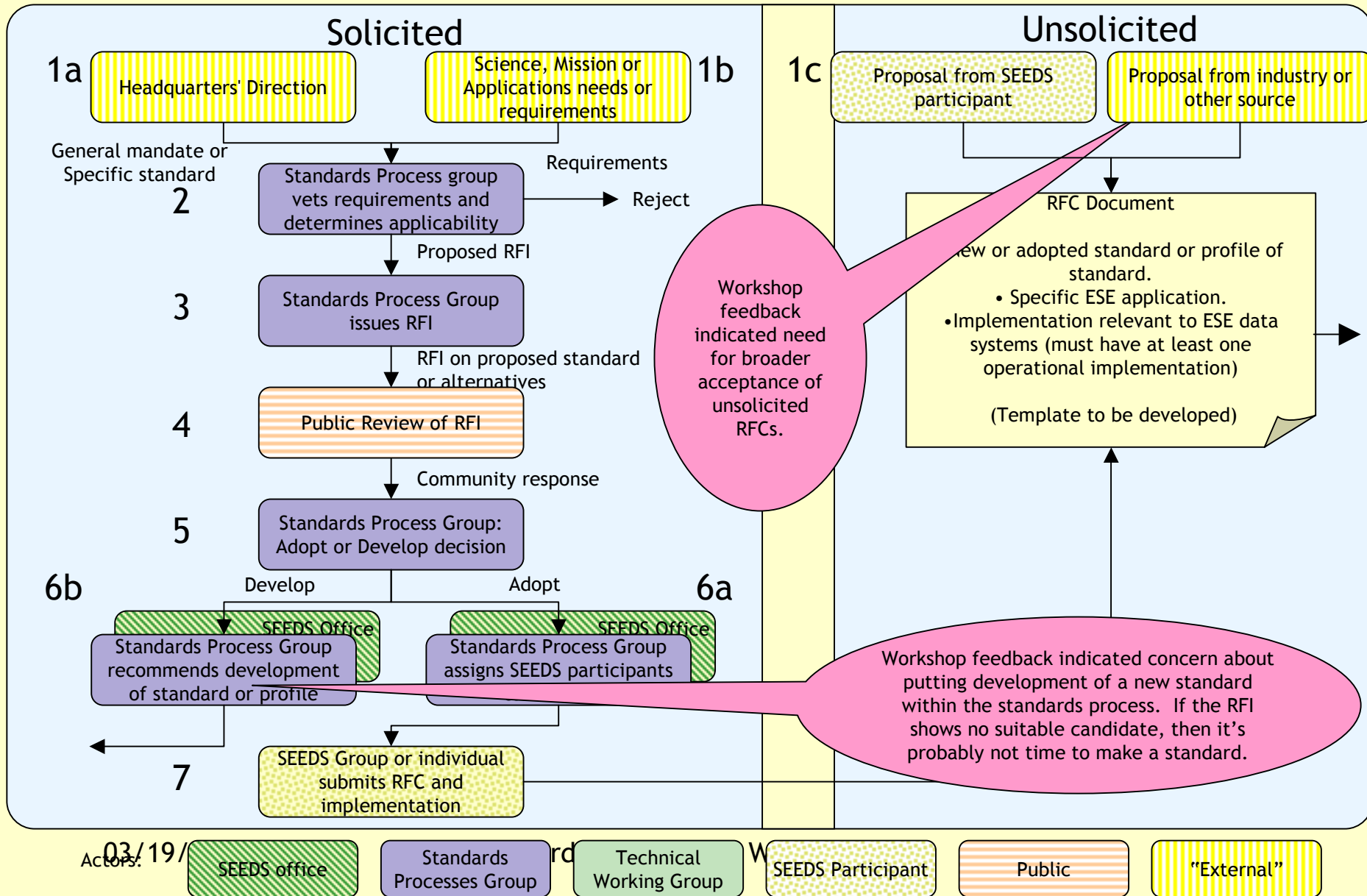


What's wrong?

- Concern over standards development component.
 - If standard must be developed, it's not ready to be a standard.
- Participation should be broader
 - Anyone should be able to propose an RFC - not only "SEEDS participants". Industry submitted RFCs should be encouraged
 - Standards Process Group - Stakeholder community and industry and other agencies (EPA, NOAA,..) should be represented in the Standards Process Group.
 - Technical Working Group should allow voluntary (self-assigned) participation as well as invited experts and Standards Process Group members.



Standards Process: Path to RFC





What's Missing?

- Explicit communication between and among the SEEDS working groups - we need to demonstrate more coordination.
- Cost impact/estimate of standards implementation should be considered for ESE support of standard - where in the process does this come in
- Metrics for evaluating effectiveness of standards process. Split opinion.



What needs clarification?

- Define what it means to be an RFC, draft standard, proposed standard etc. and when it's safe to count on it to implement
- Rewrite charter to make objectives -> goals and other edits - should talk about why standards are advantageous or pointer to it.
- Who may revise an RFC in process?
 - Only original submitter?
 - Technical Working Group?
 - Issue is responsiveness, communication, intellectual ownership (in general sense).
- All proposed standards should be rewritten in SEEDS RFC format. RFC should only include spec - appendices should include references to implementation, tools, and operational experience



Principles that should be made explicit.

- Evolution and fostering innovation means not only accepting new things, but also killing things that are out-dated.
 - Explain how this is accomplished
- Rules of engagement
 - First adopt, second profile, last develop (or even develop is out of scope)



“significant quote”

- Jim Frew - “If this process works, this will increase level of community participation orders of magnitude greater than there ever has been before.”



Backup Charts
(none of these were presented because there
was not enough time)

SEEDS Standards Process Study Team



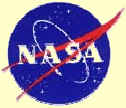
SEEDS NTMS Findings

SEEDS Formulation Team
“Near-Term Missions Standards” study



SEEDS Goals

- Data and Interface Standards must support SEEDS Goals:
 - Ensure the timely delivery of Earth Science information at an affordable cost.
 - Maximize availability and utility of ESE products.
 - Fully engage the community on data management issues, objectives, and solutions.
 - Assure continued effectiveness of an increasingly distributed and heterogeneous network of ESE funded systems and services.



SEEDS Near-Term Findings (1)

- Requirements for system interchange among ESE components are different from requirements for distribution to end-users.
- System interchange packaging standards must focus on interface standardization, completeness, and correctness of transfer over "ease of use". The primary requirement for distribution to end-users is "ease of use".
- In the near-term, the chief mode of delivering data remains the transfer of discrete files. Therefore, data format is the critical component of data packaging. Technologies such as content data standards are insufficient for transferring complex data between different user communities without information loss or corruption.
- The use of a general standard (for example, HDF for data format or FGDC for metadata content) is insufficient for interoperability. The interfacing systems must also use a common "profile" of the standard. A profile is a specific convention of use of a standard for a specific user community.



Status

- Near-Term Missions Standards (NTMS) study is completed
 - Presented draft near-term mission standards recommendations at the 2nd SEEDS workshop in June 2002.
 - Incorporated community and near-term missions' feedback in the recommendation document
 - Posted final draft recommendation document at SEEDS website.
- NTMS recommendations provided a first evolutionary step in adoption of standards by endorsing specific standards.
- Some members of the NTMS study have joined the Standards Process study.



SEEDS Near-Term Findings (2)

- “Community-based” standards, or profiles of standards, are more closely followed than standards imposed by outside forces. Community-based standards are standards developed by a community to meet cooperatively defined community needs.
- The ESE, as a whole, or the systematic measurement missions independently, must plan for evolution of requirements for packaging of mission science data over the lifetime of the mission and beyond. These include standards for:
 - Data formats.
 - Catalog interfaces.
 - Associated metadata content and format.
 - Documentation standards



SEEDS Near-Term Recommendations(1)

- ESE Standard Data Products must be file based and must be formatted for interchange among ESE data system components using HDF, HDF-EOS or netCDF.
- ESE Mission Standard Data Products must further be defined using a profile of HDF, HDF-EOS or netCDF. The profile must be chosen or developed with community input and in consultation with experts in the application of the base standard (i.e., HDF or netCDF).
- ESE Mission Standard Data Product dataset catalog metadata must be entered into the Global Change Master Directory.
- ESE Mission Standard Data Product inventory metadata must be populated using either the ECS data model or the ECHO data model.



SEEDS Near-Term Recommendations(2)

- ESE Mission Standard Data Products must be described using the EOSDIS Guide documentation standard.
- ESE Mission Standard Data Products must be made available for distribution by inventory using a system compatible with the EOSDIS V0 protocol, Z39.50 using CIP or GEO profiles, or any order and distribution mechanism compatible with ECHO.
- ESE distribution components must enable packaging of standard products in formats and ways that emphasize end-user needs and convenience.